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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/475,093	12/30/1999	Matthew D. Halfant	GENSP034	3180

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EXAMINER

HUYNH, CONG LAC T

ART UNIT	PAPER NUMBER
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2178

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/475,093	Applicant(s) HALFANT, MATTHEW D.	
	Examiner Cong-Lac Huynh	Art Unit 2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: RCE filed on 8/18/05 to the application filed on 12/30/99.
2. Claims 21-41 are pending in the case. Claims 21, 28, 35 are independent claims.
3. The rejections of claims 21-41 under 35 U.S.C. 103(a) as being unpatentable over McDade in view of Tillman have been withdrawn in view of the amendment.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 21-23, 25-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Tillman et al. (US Pat No 6,496,980 B1, 12/17/02, filed 12/7/98).

Regarding independent claim 21, Tillman discloses:

- selecting from the original digital video stream, a particular one of the digital video frames for enhancement (col 7, lines 19-50: the video segment of the original video stream is selected to replay by user desire)

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- selecting from the digital video stream, others of the digital video frames associated with the digital video frame to be enhanced (col 7, lines 19-50: the additional video data sent from the server for the selected video segment of the video stream to the enhancement layer is others of the video frames associated with the digital frame to be enhanced)
- enhancing the selected video frame based upon information included in the other digital video frames and the particular digital video frame (col 7, lines 19-50, col 10, line 57 to col 11, line 15, figure 4)

Regarding claim 22, which is dependent on claim 21, Tillman discloses:

- obtaining movement information for the selected digital video frame and the other digital video frames (col 9, lines 33-57: the resulting frame rate is the movement information for the selected video segment and the other video frames for displaying the image)

Regarding claim 23, which is dependent on claim 22, Tillman discloses:

- identifying portions of the associated digital video frames corresponding to the portion to be enhanced (col 7, lines 35-50: sending *additional video data for the selected video segment in one or more enhancement layers* shows that the portions of the associated digital video frames corresponding to the portion to be enhanced is identified)

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- enhancing the selected video segment by providing a higher quality image with the larger image (col 7, lines 35-50, col 10, line 57 to col 11, line 15)

Regarding claim 25, which is dependent on claim 24, Tillman discloses manipulating selected ones of the enhanced digital video frames (col 7, lines 35-50, col 10, line 57 to col 11, line 15).

Regarding claim 26, which is dependent on claim 22, Tillman discloses manipulating is selected from a group comprising: a zoom operation, a contrast enhancement operation, a luminance control operation, a color adjustment operation, a gamma correction operation, an image sharpening operation, and a color saturation operation (col 10, line 57 to col 11, line 15: enhancing a selected video can be done by providing smoother images, larger images, clearer images *where providing larger images is a zoom operation*).

Regarding claim 27, which is dependent on claim 26, Tillman discloses that the method is executed by a processor unit included in a digital video disc (DVD) player (col 4, lines 9-30, col 11, lines 47-60).

Claims 28-30, 32-34 are for a computer program product of method claims 21-23, 25-27, and are rejected under the same rationale.

Claims 35-37, 39-41 are for an apparatus of method claims 21-23, 25-27, and are rejected under the same rationale.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 24, 31, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tillman et al. (US Pat No. 6,496,980 B1, 12/3/02, filed 12/7/98) in view of McDade et al. (US Pat No. 6,490,324 B1, 12/3/02, filed 12/8/98).

Regarding claim 24, which is dependent on claim 23, Tillman discloses enhancing different segments of the video content (col 6, lines 53-67).

Tillman does not explicitly disclose:

- selecting another of the stream of digital video frames for enhancement when the enhancement is complete
- continuing the selecting until all of the selected digital video frames, or portions thereof, have been enhanced

McDade discloses manipulating selected ones of the enhanced digital video frames (col 11, lines 25-39; col 9, lines 26-57).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified McDade to include the above steps since the fact that manipulating the selected ones of the digital video frames, which is considered an enhancement of the encoded video frames, is performed for each of the video data streams and continues to perform for all of the selected video frames.

Also, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined McDade into Tillman since the enhancement of all of the selected video frames in McDade provides the advantage to incorporate into the enhancement of different segments of the video content in Tillman for effectively enhancing all of the desired video segments selected by a user.

Claims 31 and 38 are for a computer program product and an apparatus of method claims 21-23, 25-27, and are rejected under the same rationale.

Response to Arguments

8. Applicant's arguments filed 8/18/05 have been fully considered but they are not persuasive.

Applicants argue that claim 21, as amended, "specifically teaches only a single (original) video stream, and therefore does not require a second video stream as demanded by Tillman" (Remarks, page 7).

Examiner respectfully disagrees.

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In Tillman, data of the same digital video stream is used to enhance the selected video segment, which is the particular video frame, via different layers (see figures 3 and 4).

There is only a single video stream of the original video frame as shown in figure 4 and col 7, lines 19-50 where enhancement is applied to the same frame to enlarge the original video data.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Van Der Schaar et al. (US Pat No. 6,940,905 B2, 9/6/05, filed 6/21/01, priority 9/22/00).

Peng et al. (US Pat No. 6,792,044 B2, 9/14/04, filed 5/16/01).

Markel (US Pat No. 6,791,579 B2, 9/14/04, filed 8/27/01, priority 8/21/00).

Hannah (US Pat No. 6,771,704 B1, 8/3/04, filed 2/28/00).

Choi et al. (US Pat No. 6,757,860 B2, 6/29/04, filed 5/3/01, priority 8/25/00).

Ketcham (US Pat No. 6,704,357 B1, 3/9/04, filed 9/28/99).

Chen et al. (US Pat No. 6,263,022 B1, 7/17/01, filed 7/6/99).

Margulis et al. (US Pat No. 6,157,396, 12/5/00, filed 2/16/99).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cong-Lac Huynh whose telephone number is 571-272-4125. The examiner can normally be reached on Mon-Fri (8:30-6:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on 571-272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-4125.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Cong-Lac Huynh
Examiner
Art Unit 2178
10/16/05